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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/737,770

12/18/2000

In-Duk Song

8733.339.00

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03/26/2009

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EXAMINER

RUDE, TIMOTHY L

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

03/26/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* IN-DUK SONG

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Appeal 2008-5346  
Application 09/737,770  
Technology Center 2800

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Decided:<sup>1</sup> March 26, 2009

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Before BRADLEY R. GARRIS, CATHERINE Q. TIMM, and  
JEFFREY T. SMITH, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 2-10, 12-18, and 21-34. We have jurisdiction under 35 U.S.C. § 6.

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the Decided Date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

We AFFIRM for the reasons expressed in the Answer and below.

*STATEMENT OF THE CASE*

Appellant claims an in-plane switching liquid crystal display device comprising a common line 120 formed of a metal and a plurality of common electrodes 130 formed of a transparent conductive second material (claim 4; Figs. 9-10).

Further details regarding the claimed subject matter are set forth in representative independent claim 4 which reads as follows:

4. An in-plane switching liquid crystal display device comprising:  
a gate line formed of a first material on a first substrate;

a data line on the first substrate, the data line being perpendicular to the gate line;

a common line on the first substrate, the common line being parallel with the gate line and being formed of a metal;

a plurality of pixel electrodes and a plurality of common electrodes having finger portions and arranged in parallel on the first substrate, the common electrodes being a transparent conductive second material different from the first material, and the pixel electrodes being one of a transparent and opaque material;

a first connecting line parallel to the gate line, wherein the plurality of pixel electrodes are perpendicular to the first connecting line, first ends of the pixel electrodes are connected to the first connecting line and second ends of the pixel electrodes are connected to a second connecting line;

a storage electrode over the common line, wherein the storage electrode contacts the second connecting line via a storage contact hole;

a liquid crystal layer between the first and second substrates, wherein the common electrodes alternate with and are parallel to the pixel electrodes;  
and

an auxiliary common line on the first substrate, the auxiliary common line being connected with the common electrodes, wherein the common electrodes are formed on a same layer of the first substrate as the gate line,

wherein the common electrodes are arranged to directly contact the common line.

The prior art set forth below is relied upon by the Examiner as evidence of obviousness:

Nakashima	US 6,049,365	Apr. 11, 2000
Ishikura	US 6,219,125 B1	Apr. 17, 2001
Colgan	US 6,278,502 B1	Aug. 21, 2001
Wakagi	US 6,300,995 B1	Oct. 9, 2001
Yoshioka	US 6,323,918 B1	Nov. 27, 2001
Son	US 2002/0008824 A1	Jan. 24, 2002
Ando	US 6,356,330 B1	Mar. 12, 2002
Jeon	US 6,362,858 B1	Mar. 26, 2002

Applicant's Admitted Prior Art (APA) (Spec. 1-8; Fig. 8).

The Examiner rejects claims 2, 4, 5, 7, 10, 12, 17, 18, 21, 22, and 33 under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Jeon, Wakagi, and Ando.

The Examiner also rejects the remaining claims on appeal under 35 U.S.C. § 103(a) as being unpatentable over the prior art applied above against independent claims 4 and 17 in various combinations with the other prior art references listed previously.

### *ISSUE*

Has Appellant shown reversible error in the Examiner's conclusion that it would have been obvious to modify APA in view of Jeon so as to

thereby obtain an in-plane switching liquid crystal display device having a metal common line and common electrodes formed from a transparent conductive second material as required by independent claim 4 (and by independent claim 17)?

### *FINDINGS OF FACT*

The Examiner acknowledges that APA fails to explicitly disclose various claim 4 features such as the transparent material of construction for the common electrodes but finds that Jeon teaches an in-plane switching liquid crystal display device comprising a common line formed of metal (i.e., Cr) and common electrodes formed of a transparent conductive material (i.e., indium tin oxide (ITO)) which yields certain advantages (Ans. 4-6; Jeon col. 2, ll. 50-58, claims 1-3).<sup>2</sup>

Based on these findings, the Examiner concludes that it would have been obvious for one with ordinary skill in this art to modify the in-plane switching liquid crystal display device of APA so as to obtain a common line formed of metal (i.e., Cr) and common electrodes formed of a transparent conductive second material (i.e., ITO) as taught by Jeon in order to obtain the advantages taught by Jeon (Ans. 6).

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<sup>2</sup> Like Jeon, Appellant discloses forming common lines from a metal such as Cr and forming common electrodes from transparent conductive material such as indium tin oxide (ITO) (Spec. 9, ll. 4-12).

*PRINCIPLES OF LAW*

On appeal to the Board, an Appellant can overcome a § 103 rejection by showing insufficient evidence of prima facie obviousness. *In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006).

*ANALYSIS*

Appellant does not present separate arguments for any of the dependent claims on appeal including the separately rejected dependent claims (Br. 9-11). Accordingly, in assessing Appellant's arguments, we will focus on independent claim 4 since this claim contains the limitations relevant to Appellant's arguments.

Appellant points out that the common line and common electrodes of APA are not disclosed as being formed from a metal and a transparent conductive second material as required by independent claim 4 (as well as independent claim 17) (Br. ¶ bridging 9-10). Appellant argues that "[t]he Examiner does not suggest that any of Jeon, Wakagi, or Ando disclose or suggest these features, and a thorough review of these references reveals that they suffer the same deficiencies with respect to these elements of independent claims 4 and 17 as the APA" (Br. 10).

This argument is not well taken. As indicated in the Findings of Fact section of this opinion, the Examiner's unpatentability determination expressly relies on Jeon's teachings of a common line formed from metal (i.e., Cr) and common electrodes formed from a transparent conductive material (i.e., ITO) (Ans. 3-6). Further, on the record before us, Appellant has not shown with any reasonable specificity that the Examiner's evidence of prima facie obviousness is insufficient. Indeed, Appellant does not even

acknowledge that the Examiner's unpatentability determination is in the form of an obviousness conclusion based on the combined teachings of APA and Jeon.

*CONCLUSIONS OF LAW*

Appellant has not shown error in the Examiner's conclusion that it would have been obvious to modify APA in view of Jeon so as to thereby obtain an in-plane switching liquid crystal display device having a metal common line and common electrodes formed from a transparent conductive second material as required by independent claim 4 (and by independent claim 17).

We sustain, therefore, each of the § 103 rejections advanced by the Examiner in this appeal.

*ORDER*

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(v)(2008).

AFFIRMED

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